

REMARKS/ARGUMENTS

In this Second Amendment Under 37 C.F.R. § 1.111 ("Second Amendment"), Applicant cancels, without prejudice or disclaimer, claims 1-7.

Prior to entry of the Second Amendment, claims 1-53 were pending in the application. After entry of the Second Amendment, claims 8-53 are pending in the application.

In the Office Action, the Examiner rejected claims 1-21, 24-38, and 53 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,646,257 to Essig et al. ("Essig"); and rejected claims 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Essig in view of U.S. Patent No. 5,790,874 to Takano et al. ("Takano").

Applicant respectfully traverses the Examiner's rejections of claims 8-38 and 53.

Foreign Priority

As discussed in the Amendment Under 37 C.F.R. § 1.111 ("First Amendment") filed on January 16, 2008, the Form PTOL-326 in the Office Action mailed on October 18, 2007, did not indicate the complete status of the claim for foreign priority because none of boxes 1, 2, or 3 was checked.

Applicant notes that in the Form PTOL-326 in the Office Action mailed on April 29, 2008, not only are none of boxes '1', '2', or '3' checked, but box '12' and box 'a' are no longer checked either. Thus, the complete status of the claim for foreign priority remains unresolved.

As a result, Applicant reiterates Applicant's request that the Examiner indicate the complete status of the claim for foreign priority in the next paper mailed by the U.S. Patent and Trademark Office ("USPTO").

Drawings

As also discussed in the First Amendment, the Form PTOL-326 in the Office Action mailed on October 18, 2007, did not indicate the status of the drawings filed on December 17, 2003.

As a result, Applicant reiterates Applicant's requests that the Examiner indicate the status of the drawings filed on December 17, 2003—as well as the drawings filed with the First Amendment—in the next paper mailed by the USPTO.

Essig

Applicant understands FIGs. 1 and 3 of the Essig reference, as well as the associated descriptions, to be replete with errors. As a result, Applicant submits Applicant's understanding of relevant portions of Essig below.

When Essig discusses a "multiplier" with regard to FIGs. 1 and 3, it is referring to multiplier 164, not multiplexer 161. Thus, FIG. 1 illustrates a microprocessor 100 that incorporates a multiplier 164 (compare to Essig, c. 3/ll. 9-10). And in FIG. 1, arithmetic logic unit 127 may receive data from: (1) general purpose register 119 via A multiplexer 163; and either (2a) general purpose register 119 via C multiplexer 167 and B multiplexer 165 or (2b) machine control register 113, program status register 115, or interrupt

condition register 116 via multiplexer 161 and B multiplexer 165 (compare to Essig, c. 3/ll. 50-55).

Similarly, FIG. 3 is a block diagram of multiplier 164 of FIG. 1 incorporating the domino principle discussed in conjunction with FIG. 2 (compare to Essig, c. 5/ll. 1-4). Applicant's understanding is consistent with the inputs to multiplier 164 (data bus 175 and conductor bundles 177) and the output from multiplier 164 (unnamed output 173) in FIGs. 1 and 3. Thus, for example, unnamed output 173 from multiplier 164 is not an input to general purpose register 119.

Also, address arithmetic unit 111 of Essig is part of instruction portion 131, not data portion 133. For at least this reason, Applicant submits that address arithmetic unit 111 does not deal with data—such as a multiplicand, multiplier, or modulus—and, thus, is not a modulus recoder. For similar reasons, instruction address register 147 is not a modulus feedback register.

Additionally, FIG. 1 of Essig depicts at least nine (9) multiplexers: displacement multiplexer 135; index multiplexer 137; instruction address multiplexer 145; X multiplexer 157; Y multiplexer 159; multiplexer 161; A multiplexer 163; B multiplexer 165; and C multiplexer 167. Applicant submits that the Office Action fails to establish a proper prima facie case of anticipation where, as here, the Office Action simply alleges that Essig discloses “a mux (see figure 1), wherein the mux inputs at least one output

from the [Booth] recoder, where the [Booth] recoder and the mux are used to obtain a partial product” (Office Action, paragraph bridging pages 5-6) (emphasis added)—particularly when the partial products of Essig are both generated and summed within multiplier 164.

Claim Rejection Under 35 U.S.C. § 102(b)—Independent Claims

Given the understanding of Essig, discussed above, Applicant submits that the Office Action fails to establish a prima facie case of anticipation of any of independent claims 8, 11, 19, 26, 30, or 53, for at least the reasons discussed below.

The Office Action fails to show that Essig discloses at least “a modulus recoder”, “a multiple modulus synch register”, and “wherein an input to the multiple modulus synch register is at least one output from the modulus recoder”, as recited in independent claim 8.

The Office Action fails to show that Essig discloses at least “a modulus recoder”, “a modulus feedback register”, “wherein an input to the modulus feedback register is at least one output from the modulus recoder”, and “wherein an input to the Booth register is at least one output from the Booth recoder”, as recited in independent claim 11.

The Office Action fails to show that Essig discloses at least “a mux”, “wherein the mux inputs at least one output from the Booth recoder”, and “wherein the Booth recoder and the mux are used to obtain a partial product”, as recited in independent claim 19.

The Office Action fails to show that Essig discloses at least “a modulus recoder” and “wherein if an enabling signal does not have a predetermined value, the modulus recoder generates a current multiple modulus selection signal”, as recited in independent claim 26.

The Office Action fails to show that Essig discloses at least “wherein an input to the Booth synch register is at least one first output from the Booth recoder” or “wherein an input to the Booth register is at least one second output from the Booth recoder”, as recited in independent claim 30.

The Office Action fails to show that Essig discloses at least “means for modulus storing, wherein the means for modulus storing stores at least one output value from a modulus recoder”, as recited in independent claim 53.

Claim Rejection Under 35 U.S.C. § 102(b)—Dependent Claims

Applicant submits that dependent claims 9, 10, 12-18, 20, 21, 24, 25, 27-29, and 31-38 are patentable under 35 U.S.C. § 102(b) for at least the same reasons as independent claims 8, 11, 19, 26, and 30, from which claims 9, 10, 12-18, 20, 21, 24, 25, 27-29, and 31-38 directly or indirectly depend.

Claim Rejection Under 35 U.S.C. § 103(a)—Dependent Claims

The Office Action does not argue that Takano overcomes the deficiencies discussed above with regard to Essig. For at least this reason, Applicant submits that the Office Action fails to establish a prima facie case of obviousness under 35 U.S.C. § 103(a) for either claim 22 or 23.

Request for Reconsideration and Allowance

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of each of claims 8-53 in connection with the present application is earnestly solicited.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Director of the USPTO is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; in particular, extension of time fees.

Respectfully submitted,

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